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02/05/26
04:59 PM
A2512009

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of San Diego Gas & Electric Company (U 902-E) for Approval of Palomar Decarbonization Demonstration Project	A.25-12-009

PROTEST OF AIR PRODUCTS AND CHEMICALS, INC.

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DATED: February 5, 2026

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PROTEST OF AIR PRODUCTS AND CHEMICALS, INC.

Pursuant to Rule 2.6 of the California Public Utilities Commission's Rules of Practice and Procedure, Air Products and Chemicals, Inc. ("Air Products") submits this timely protest to the Application of San Diego Gas & Electric) (U 904 G) ("SDG&E") for Approval of the Palomar Decarbonization Demonstration Project ("Application" or "Palomar Project").

I. INTRODUCTION

The Palomar Project consists of a 274-kilowatt photovoltaic system that partially powers a 1.25 megawatt electrolyzer capable of producing up to 500 kilograms ("kg") per day of hydrogen.[1] That hydrogen is used for three purposes: (1) to fuel two Toyota Mirai passenger vehicles located at the Palomar Energy Center, via a single-position hydrogen dispensing station, (2) to cool the two combustion turbines and a single steam turbine that constitute the Palomar Energy Center, which require a total of approximately 1.8 kg per day for daily operation, and (3) limited blending with natural gas (up to 2% by volume) for one of the combustion turbines.[2] SDG&E claims that the project reduces carbon emissions by 36 metric tons of CO2 annually: (1) 12 metric tons for the two passenger vehicles, (2) 12 metric tons associated with on-site production of hydrogen for cooling, and (3) 12 metric tons associated with the 2% hydrogen

[1] Exhibit SDGE-02 (Exh. SDGE-02), Prepared Testimony of Pooyan Kabir and Kevin Counts on Behalf of San Diego Gas & Electric Company, A.25-12-009, Dec. 16, 2025 at PK_KC-4:4-5.
[2] *See* Exh. SDGE-02 at PK_KC-4.

blend used in one of the combustion turbines.[3] Setting aside the claimed reductions associated with the passenger vehicles (which could be fueled from a public station and obtain the same reductions), the total claimed reduction in carbon emissions is estimated at 24 metric tons a year—equivalent to removing four additional gasoline powered vehicles from the road, according to SDG&E's own calculations.[4]

SDG&E seeks to recover a revenue requirement of $31.1 million from ratepayers for the Palomar Project,[5] which is not cost-effective given the extremely meager emission reductions. This is not a good use of ratepayer funds.

The Commission previously denied funding for the Palomar Project in SDG&E's 2024 General Rate Case (A.22-05-016), raising concerns about the costs to the ratepayers, and the lack of any explanation as to why this pilot program would provide "unique insights that could not be obtained from the efforts of others."[6] Nothing in this Application adequately addresses those concerns, and the Application should be denied.

II. GROUNDS FOR PROTEST

A. THE ROLE OF THE IOUs IN THE HYDROGEN SECTOR HAS NOT BEEN DETERMINED

As an initial matter, the Commission should not be in the position of requiring ratepayers to pay for hydrogen-related projects when the role that investor-owned utilities ("IOUs") will play, if any, in the hydrogen sector is yet to be determined. Just last month, the Commission

[3] Exh. SDGE-02 at PK_KC-17:4-9.
[4] Based upon SDG&E's claim that the use of the two Toyota Mirai passenger vehicles result in reductions of approximately 12 metric tons a year.
[5] Application of San Diego Gas & Electric Company (U 902 E) for Approval of Palomar Decarbonization Demonstration Project, A.25-12-009, Dec. 16, 2025 at 12.
[6] D.24-12-074, *Decision Addressing the 2024 Test Year General Rate Cases of Southern California Gas Company and San Diego Gas & Electric Company*, A.22-05-015/016, Dec. 19, 2024 at 405.

denied Pacific Gas and Electric's ("PG&E") request for gas RD&D funding for hydrogen-specific activities because the Commission has not yet "provided guidance on the appropriate role of gas ratepayers in funding hydrogen RD&D."[7]

Setting aside the IOU role in hydrogen, the Commission itself has yet to determine the extent to which it has jurisdiction over hydrogen. In Southern California Gas Company's ("SoCalGas") application to implement a revenue requirement for Phase 2 of its Angeles Link pipeline project, the Commission is currently considering several legal issues that may ultimately define the extent of the Commission's jurisdiction over hydrogen, including whether hydrogen infrastructure constitutes "gas plant" within the meaning of California Public Utilities Code section 221.[8] As Air Products has explained in briefing in that proceeding, given the uncertainty associated with the scope of the Commission's jurisdiction and the California legislature's historic reluctance to extend the Commission's jurisdiction to hydrogen, the Commission should defer to the California legislature for any determination as to the scope of its jurisdiction.[9]

Finally, neither the Commission, nor its sister energy agency, the California Energy Commission, has yet defined a clear role for combustion turbines fueled by hydrogen or hydrogen blended with natural gas. In its recent revisions to the Tenth Edition of the RPS Guidebook, the Energy Commission declined to include gas turbines utilizing renewable hydrogen as eligible renewable energy resources, despite the urging of Air Products and others.[10] The Commission is in the process of developing the Reliable and Clean Power Procurement

[7] Resolution G-3618 at 16.
[8] A.24-12-011, *Assigned Commissioner's Scoping Memo and Ruling*, July 31, 2025 at 4.
[9] Opening Brief of Air Products and Chemicals, Inc. Addressing Phase 2A Threshold Issues, A.24-12-011, Sept. 3, 2025 at 14-15.
[10] Air Products' Comments on the Draft Renewables Portfolio Standard 10th Edition Guidebook, Docket No. 21-RPS-02, Oct. 20, 2025 at 2; *see Renewables Portfolio Standard Eligibility*, 10th Edition, California Energy Commission, Dec. 2025.

Program, or RCPPP, in its Integrated Resource Planning proceeding (R.20-05-003), and a number of parties have proposed that hydrogen-fueled combustion turbines should be eligible to meet a clean energy standard adopted as part of the RCPPP.[11] However, the Commission has yet to issue a proposed RCPPP, and the parameters of if, or how, hydrogen-related technologies will qualify under the RCPPP are yet to be determined. Moreover, hydrogen resources do not form part of the current Integrated Resource Plan ("IRP") preferred system plan.[12]

Air Products agrees with SDG&E that there should be an important role for hydrogen to play in the state's clean energy goals.[13] However, the Commission (and the California legislature) must take further steps to define that role, and what part the IOUs will play in that role, before compelling ratepayers to fund projects like the Palomar Project (or PG&E's RD&D efforts addressed in G-3618).

SDG&E cites the success of the State's Renewable Portfolio Standard ("RPS") in fostering increases in solar PV and the growth of energy storage as a reason why ratepayers should be obligated to fund the Palomar Project.[14] However, both of those successes resulted from legislative and/or Commission procurement mandates that provided the necessary market

[11] Middle River Power LLC Reply Comments on Reliable and Clean Power Procurement Staff Proposal, R.20-05-003, Aug. 5, 2025 at 15; Reply Comments of Calpine Corporation on Administrative Law Judge's Ruling Seeking Comments on Reliable and Clean Power Procurement Staff Proposal, R.20-05-003, Aug. 5, 2025 at 6; Green Hydrogen Coalition Comments on RCPPP Staff Proposal and Workshops, R.20-05-003, July 2025 at 9.
[12] *See* D.24-02-047, *Decision Adopting 2023 Preferred System Plan and Related Matters, and Addressing Two Petitions for Modification*, R.20-05-003, Feb. 15, 2024 at 61 ("Finally, a number of parties included comments that are not actionable within the timeframe for this decision, but that can be considered for the next IRP cycle. These included but were not limited to . . . [a]ssumptions about hydrogen, including renewable hydrogen, and renewable natural gas should be included[.]").
[13] Exhibit SDGE-01, Prepared Direct Testimony of Ari Beer on Behalf of San Diego Gas & Electric Company, A.25-12-009, Dec. 16, 2025 at AB-2:2-3.
[14] Exh. SDGE-01 at AB-20:6-7.

signals for the private sector to invest in these technologies. No such mandate exists with regard to hydrogen-fueled combustion turbines, as outlined above. In fact, the Commission declined to adopt such a proposed mandate in connection with mid-term reliability procurement ordered in the IRP proceeding (R.20-05-003).[15] And, until the Commission and/or the legislature take further steps to define the role that hydrogen-fueled combustion turbines will play, ratepayers should not be obligated to fund speculative RD&D ventures such as the Palomar Project.

B. SDG&E FAILS TO DEMONSTRATE ANY VALUE TO THE PILOT

In its initial rejection of funding for the Palomar Project in SDG&E's 2024 GRC, the Commission found that SDG&E had failed to show that Palomar "would provide unique insights that could not be obtained from the efforts of others."[16] SDG&E's renewed Application still fails to demonstrate any value to the Palomar Project.

First, the Project will fire a single combustion turbine with up to 2% of hydrogen with natural gas.[17] Yet SDG&E states that blending up to 5% of hydrogen with natural gas into the GE Frame 7 GTC "is technically sound and operationally safe *based on the previous feasibility testing and project results in the literature for the same unit.*"[18] It is unclear what, if any, insights would be obtained from using blended hydrogen and natural gas in a combustion turbine at levels that are less than half of levels already deemed in other projects to be "technically sound and operationally safe." And SDG&E concedes that increasing the blend percentage would add costs, including additional storage and potentially turbine retrofits.[19]

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[15] R.20-05-003, Alternate Proposed Decision Requiring Procurement to Address Mid-Term Reliability (2023-2026) (May 21, 2021) at 3; *see also* Exh. SDGE-01 at AB-22.
[16] D.24-12-074 at 405.
[17] Exh. SDGE-02 at PK_KC-16:23.
[18] *Id.* at PK_KC-10:4-6.
[19] *Id.* at PK_KC-10:10-12.

Second, with regard to the production, blending and storage of hydrogen, the Palomar Project appears to be duplicative of the blending pilots that SDG&E proposed in A.22-09-006, which are still pending approval.[20] SDG&E notes that it has proposed in that proceeding that the Palomar Project electrolyzer be used to support its blending pilot, rather than using an electrolyzer dedicated to that pilot.[21] While SDG&E touts the cost savings associated with the use of a single electrolyzer,[22] its proposal also confirms the overlap between the blending pilot and the Palomar Project. The proposal further raises questions as to what "unique insights" the Palomar Project would provide that the blending pilot will not.

Third, the Palomar Project will also provide a small amount of hydrogen (typically, only 1.8 kg a day) for combustion and steam turbine cooling. SDG&E explains that it previously trucked in approximately 800 kg of grey hydrogen per year for generator cooling.[23] SDG&E claims a minor emissions reduction associated with the use of on-site hydrogen production for cooling, based on both the carbon intensity of the hydrogen produced, and the elimination of the need for trucking hydrogen to the site.[24] SDG&E provides no explanation of the cost differences between trucking in grey hydrogen and producing hydrogen on site for cooling, but it is extremely unlikely that producing hydrogen on site is a cost-effective approach to reducing GHG emissions, given the limited volume of hydrogen used for that purpose, and the small volume of actual emissions reductions. Requiring ratepayer support for such inefficient solutions also risks

[20] Application of Southern California Gas Company (U 904 G), San Diego Gas & Electric Company (U 902 G), Pacific Gas and Electric Company (U 39 G), and Southwest Gas Corporation (U 905 G) to Establish Hydrogen Blending Demonstration Projects, A.22-09-006, Sept. 8, 2022.
[21] Exh. SDGE-01 at AB-33:3-5.
[22] *Id.* at AB-33:8-10.
[23] Exh. SDGE-02 at PK_KC-17:1-2.
[24] *Id.* at PK_KC-17 n.15 (SDG&E assumes 200 miles between grey hydrogen production and Palomar, though it is unclear on what SDG&E bases the number).

market distortion in sectors such as hydrogen production. The Commission has previously rejected other IOU hydrogen projects and acknowledged the uncertainty over how certain hydrogen projects will impact market competition.[25]

Fourth, there is no apparent benefit to on-site hydrogen vehicle fueling, especially in light of the costs of doing so. As parties previously noted in SDG&E's GRC, "fuel cards provided by the manufacturer and public fueling stations in SDG&E's territory should be used instead of building its infrastructure."[26] In the 2024 GRC, the Commission concluded that "SDG&E can fuel its vehicles at public stations using the $15,000 fuel cards provided by Toyota with each Mirai. These fuel cards would cover the fueling costs of the vehicles for the foreseeable future."[27] The Commission also concluded in that same decision that, with regard to SoCalGas's request to build hydrogen fueling stations, it was "unclear" that ratepayers would benefit from the infrastructure, or what impacts fueling stations might have on market competition. Any "learning" that SDG&E might obtain concerning vehicle fueling appears unlikely to benefit ratepayers. Nor does it appear appropriate for SDG&E to claim emissions reductions associated with vehicle refueling—the emissions reductions associated with the vehicles were obtained through the purchase of those vehicles approved in the 2024 GRC, and where those vehicles are fueled is unlikely to have any significant emissions impact.

In its 2024 GRC decision, the Commission also directed SDG&E to explore ways to reduce the costs of the Project, including by seeking federal incentives.[28] However, while SDG&E claims that it has found state and federal funding to reduce costs, SDG&E's actual

[25] D.24-12-074 at 623, 931.
[26] *Id.* at 404.
[27] *Id.* at 394.
[28] *Id.* at 406.

direct capital spend is higher than what was projected in the 2024 GRC.[29] As in the 2024 GRC, "SDG&E has not met its burden of proof to demonstrate a clear need and measurable benefits at a reasonable cost to ratepayers,"[30] and the Application should therefore be denied.

III. EFFECT OF THE APPLICATION ON THE PROTESTANT

Air Products was founded in 1940, and has extensive experience in how to produce, store, distribute and use hydrogen in the safest and most environmentally conscious manner with established methods and protocols that exceed regulatory requirements and industry standards. Worldwide, Air Products is the largest hydrogen producer, with over 10,000 metric tons per day of production capacity and over 1,800 miles of industrial-gas pipelines. Air Products has supplied hydrogen to California businesses for over 40 years. Air Products safely operates nine hydrogen production facilities and about 30 miles of hydrogen pipeline in California. Air Products cares about the safety and reputation of our industry, and we believe our expertise and perspective would be particularly helpful and relevant to the Commission in this proceeding.

IV. ISSUES FOR CONSIDERATION

The issues to be considered in this proceeding should include the following:

1. Whether the Palomar Project provides clear benefits to ratepayers;

2. Whether the Palomar Project is cost-effective;

3. Whether SDG&E leveraged all available funding opportunities to reduce the costs of the Palomar Project;

4. The extent to which the Palomar Project is duplicative of other projects and efforts, including the pilot projects SDG&E proposed in A.22-09-006;

[29] *Id.* at 403.
[30] *Id.* at 926.

5. Whether ratepayer funding of the Palomar Project is premature given the current state of legislative and regulatory structures concerning hydrogen sector development;

6. Whether ratepayer funding would have unfair impacts on market competition; and

7. Whether the Palomar Project provides any unique insights that are not or could not be obtained through other pilots or projects and are substantial enough to warrant the costs associated with the Project.

V. CATEGORIZATION

Air Products agrees with SDG&E that this Application should be categorized as rate setting.

VI. PROPOSED SCHEDULE

Air Products has no input on the proposed schedule at this time.

VII. CONCLUSION

Air Products respectfully requests that the Commission deny the Application for the reasons set forth above.

Respectfully submitted,

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DATED: February 5, 2026